



FLIGHT



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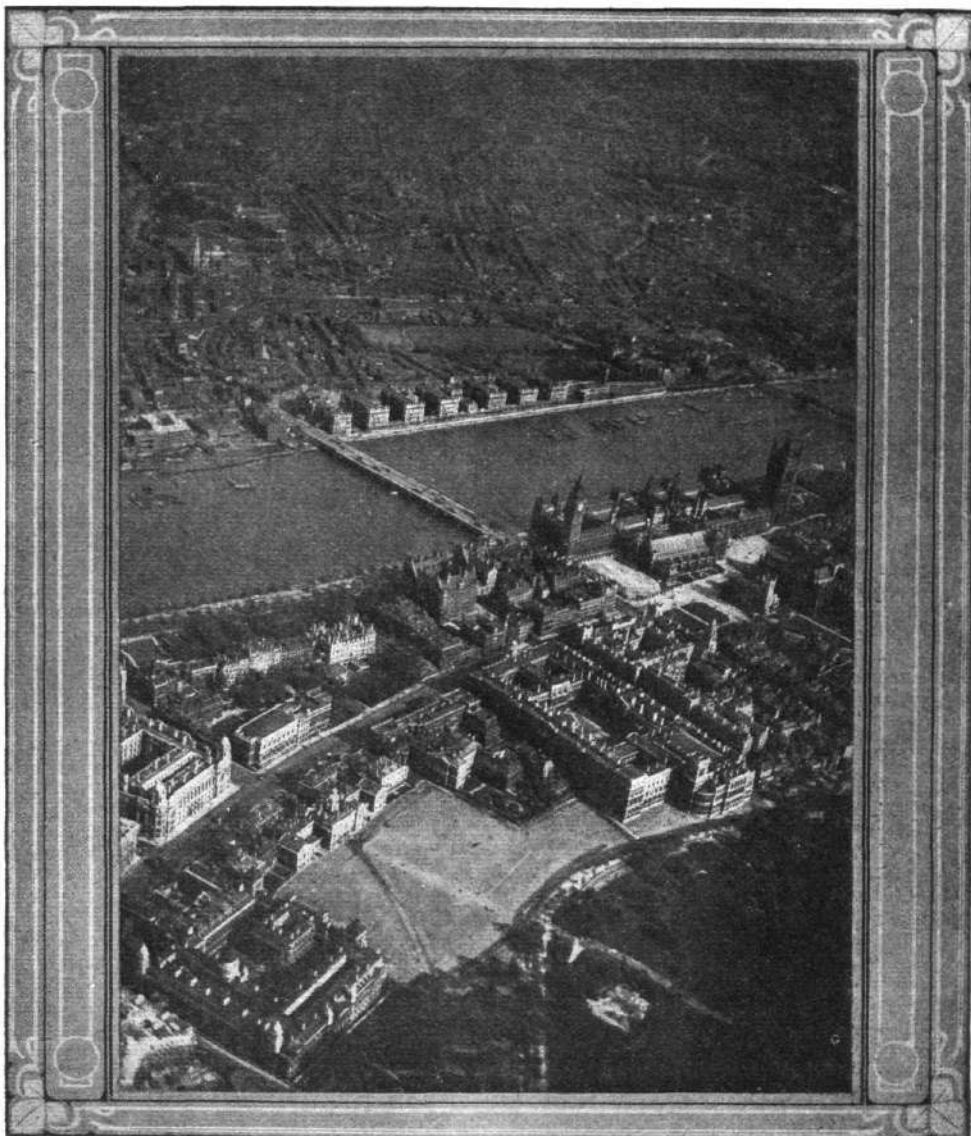


Photo by Mr. Griffith Brewer.

LONDON FROM ABOVE.—The third and last of the series of photographs by Mr. Griffith Brewer. Westminster Bridge and the Houses of Parliament are seen in the centre of this view, whilst the seven blocks composing St. Thomas' Hospital are seen on the opposite side of the river. In the foreground, the building in the left-hand corner is the Admiralty. The road running from the left-hand corner towards the Houses of Parliament will be recognised as Whitehall, with the various Government offices on either side. This photograph was taken from a height of about 1,700 ft.

TWO YEARS OF FLYING AND OF "FLIGHT."

A 1910 RETROSPECT.

IN reviewing the history of aviation during the year just passed, it must of necessity be with mixed feelings that we approach our subject. It has been a year of progress—quite phenomenal progress—in which the science of flight has emerged from what was a year ago a relatively chrysalis stage into the status of the developed butterfly. It has been a year of prodigious performances, individual and general, during which feats that were deemed impossible at its beginning have become the merest of commonplaces at its closing. Much has been learnt in the short twelve months, and for it the toll has been paid which Nature never fails to exact from the ambitious human race which is for ever trying to conquer her secrets and evade her restrictions. Heavy as that toll has been it is in the individual, rather than the general, sense that it must be grudged; for though the loss of all the brave pioneers who have sacrificed themselves to the cause of the infant science in 1910 must be deeply deplored, it is certain that the conquest of the air cannot be finally achieved without these sacrifices, and it is at the same time equally true that the chief regret of those who have given up their lives in the cause would have been that the final sacrifice meant the ending of their work. It is in the keen sense of personal loss, and in the heartfelt feeling of sympathy for those left behind, that the aeronautical world finds its grief for the dead, who, like soldiers on the battlefield, knew the risks they were taking, and faced them voluntarily in the service of mankind.

The Year in Detail.

All other events in the early part of 1910 were utterly eclipsed in the London to Manchester flight of Louis Paulhan. Here was an event that was sensational to a degree. The mere attempt reawakened an interest in the general public on behalf of flight that had been unequalled since Blériot's Channel flight in the preceding July; but when the event suddenly developed into a very realistic race between the ultimate winner and Claude Grahame-White—who was then one of the most promising British pilots learning in France—public enthusiasm knew no bounds. The accomplishment of the flight itself really remains to-day the high-water mark of special performances, and it is indeed doubtful whether anyone has ever put up a better all-round accomplishment of endurance and skill than Paulhan did on that occasion. As between the success of the Frenchman and the failure of the Englishman there was of course the usual element of luck; Grahame-White had troubles to which the modern flying machine was born an heir and has even yet not quite outgrown. Paulhan happened to be immune, but nevertheless both men surpassed themselves in the event, which is just one of those especially bright stars the light from which is a little apt to interfere with the proper perspective of subsequent progress.

The *Daily Mail* £10,000 was won in April, and up to that time the year had been remarkable rather for the spread of aviation among a rapidly-increasing number of pilots of moderate ability than for any exceptional brilliancy on the part of anyone in particular. Bad weather during the early part of the year prevented much serious flying, and perhaps the best work was done at the aviation meeting held at Heliopolis in February. In March the second British Aero Show was opened at

Olympia, and was characterised by the introduction of many new machines of British construction, which, for the most part, were copies of the Blériot type monoplane that was just then so popular. Before the end of March J. T. C. Moore-Brabazon won the British Michelin Cup and a £500 prize for a flight of 19 miles on an all-British Short biplane. The late Hon. C. S. Rolls had achieved a somewhat longer flight within the same period, but not with an all-British machine. These two performances, taken in conjunction with the great event of April, serve to show how difficult it is to compose a picture of past work with even a reasonably true rendering of its light and shade. As a flight pure and simple Moore-Brabazon's effort could scarcely be mentioned in the same breath as the London to Manchester performance, but it had a significance in England and in some respects stirred an even deeper appreciation among those who had been following the movement closely and had been anxiously watching the progress for even the least sign of British effort getting well and firmly planted in the international arena. British pilots there were who were doing well enough, but they were flying foreign machines or at any rate using foreign engines; and though their experience was sure to make for the ultimate good of the cause, many felt that the time had more than come when the all-British product should play its part more effectively in the general scheme of things.

During May the Channel was crossed for the second time, when Jacques de Lesseps flew a Blériot monoplane from Les Barraques to the South Foreland, and thereby won the Ruinat Prize of £500, which had been open at the time Blériot flew the Channel, but had been left unwon because he did not officially enter his name as a competitor. It had been the Hon. C. S. Rolls' intention to compete for this prize, but the success of de Lesseps did not abate his ambition to be the first British aviator to fly across the Channel, and early in June he flew his French Wright biplane over to Sangatte and back without alighting on French soil.

At the end of June and early in July came the Wolverhampton and Bournemouth meetings, the latter of which really formed the key to the state of the art at that time. Compared with the flying at the first Blackpool meeting, held about eight months previously, the advance was simply astounding. Then, not a single British competitor was even able to attempt a flight, but at Bournemouth half-a-dozen or more gave an excellent account of themselves, notably Grahame-White, Captain Dickson and Robert Loraine on Henry Farman biplanes, Cecil Grace on an all-British Short biplane and the Hon. C. S. Rolls on a French-built Wright biplane. Among the Continental visitors Morane proved himself to be one of the finest exponents of flight of the day and his performances with the Blériot monoplane, with which he averaged a speed of nearly 60 miles an hour for a distance of nearly nine miles, were the most remarkable of the meeting. Unfortunately the Bournemouth meeting was marred by the loss of one of Britain's very best men, the Hon. C. S. Rolls being killed while competing for the alighting prize as the result of the failure of a part of his machine while attempting a manoeuvre. Subsequent to the Bournemouth meeting, other flight meetings were held at Lanark and simultaneously at Blackpool, where

Chavez with a Blériot attained an altitude of 5,887 feet, which was then a world's record.

The most important Continental event in August was the Circuit de l'Est, a kind of aerial tour organised by the Parisian journal, *Le Matin*, comprising a series of cross-country flights, forming a circuit from Paris, *via* Troyes, Nancy, Mezières, Douai, and Amiens. Eight competitors started, and two finished, Leblanc and Aubrun. Both used Blériot monoplanes fitted with Gnome engines; and Leblanc, the winner, who secured the £4,000 prize, with, in addition, several special prizes for flights made at the various stopping places, occupied 12h. 1m. 1s. for the journey of 500 miles. Aubrun's time was 13h. 31m. 9s. A sensational event which took place in August was a flight from Paris to London by Moisant, who after a phenomenally short apprenticeship set out for the journey accompanied by his mechanic. He left Paris on August 16th and crossed the Channel on the following day. From the moment of his descent on British soil, however, misfortune overtook him and he did not reach London until September 6th. On the following Sunday Loraine flew across the Irish Channel and missed landing in Ireland by a few yards; neither he nor his machine were much the worse for the experience of a descent on the water. It was also during September that the army manoeuvres in France afforded the military authorities an excellent opportunity of demonstrating an aspect of the utility of flight that has always been regarded as one of the most important of its probable fields of definite development. The aeroplane in war is an unknown quantity that officials abroad at any rate appear to regard with grave concern. In England, our own army manoeuvres might well have afforded a similar opportunity, which was characteristically ignored almost completely. Late in the same month, September, another milestone in the history of flight was erected by Chavez, who flew across the Alps over the Simplon Pass and unfortunately lost his life when landing at the end of the achievement.

In October a new aerodrome was opened at Hendon, near London, and became the headquarters of the Blériot School in England and also of the Aeronautical Syndicate, who commenced on the commercial manufacture of an original design of all-British monoplane known as the Valkyrie. During the year Brooklands, which was first used as an aerodrome by Paulhan for demonstration flights subsequent to the Blackpool meeting of 1909, has been developed into a well-equipped flight-ground and is the scene of constant practice on the part of many newcomers in the aviation world; and indeed it has been the activity at Brooklands—perhaps more than anywhere else—that has shown the true spirit of the movement in this country.

Towards the end of October three British pilots, Grahame-White, Radley, and Ogilvie, left for America in order to compete for the Gordon-Bennett Cup, which had been won by Curtiss in the previous year, and in this event Grahame-White scored a victory for Great Britain. On the return of these competitors to England the principal activity centred round the competitions for the British Michelin Cup and the Baron de Forest £4,000 Prize for the longest flight from England across to and on the Continent. These events brought forward with startling suddenness a new English pilot in T. Sopwith, who, after a very short pupilage, obtained his certificate and put up a flight of over 100 miles for the British Michelin Cup, thereby improving upon S. F. Cody's flight of 97 miles, which had previously stood

first. Almost immediately afterwards he seized a favourable opportunity to fly his Howard Wright biplane, which was fitted with a British-built E.N.V. engine, into Belgium. His Michelin flight took place at Brooklands and his Baron de Forest flight from Eastchurch. Bad weather delayed other competitors, but on December 22nd Cecil Grace flew over to Calais, and there descended as the result of increasing wind. Attempting to fly back in the afternoon, in order to make another start, he appears to have lost his way in the fog which prevailed in the Channel, and though a prolonged search was made in the Channel and the North Sea it proved fruitless, and hope being abandoned, aviation in England thereby lost the services of another of her most valued and capable exponents of the movement.

In many respects this closing month of the year proved the most notable, not only in point of performances in the air, but by reason of the deplorable number of deaths among leading aviators. Grace, Moisant, the hero of the Paris-London flight, Hoxsey, Piccolo, Laffont, Pola and Caumont all met their deaths in December flights. The list is appalling; but it can be explained in, firstly, the general unsuitability of the weather for flying, and the fact that the closing days of the year were the last during which many valuable prizes remained open for competition. The question has been raised as to whether the closing dates for prizes of the first magnitude, like that of the Baron de Forest Prize for the cross-Channel flight, cannot usefully be altered; and since there does not seem to be any good reason why the closing date for an event of this kind should not just as well be fixed for, say, the 30th September as the 31st December, such a change is to be advocated. In the ultimate result the year 1910 saw the winning of the De Forest Prize by Sopwith, with the performance already referred to, while Cody, on his own machine fitted with a Green engine, was victorious in the competition for the British Michelin Prize, after an exciting contest with Sopwith on the Howard Wright biplane and Alec Ogilvie on his N.E.C.-engine Wright biplane. Cody's winning flight was 185.46 miles in 4 hrs. 47 mins.; while, in France, the International Michelin Cup was finally secured by Tabuteau with a flight of 365 miles in 7 hrs. 48 mins.

* * *

General Advancement.

Events have progressed so rapidly in the world of practical aviation that to label the year one of "progress" seems utterly inadequate to describe the forward movement that 1910 has marked. That forward movement is one which requires a far more expansive term than any single word in the English language can properly convey, adequate as it is in most cases. Exponents of the art have gone ahead prodigiously—far and away more than the most sanguine of prophets would have dared to forecast a year ago. The word "aviation" has to a great extent acquired a new meaning in 1910, for whereas it has hitherto been taken to apply indifferently to the navigation of the air by all or any type of machine, whether heavier or lighter than air, it has now come to be associated chiefly with the former. This has come about through the triumph of the aeroplane as compared with the dirigible balloon which the year has witnessed. Not that the latter has not forged ahead during the year, though its notable achievements have been few and far between. There have been several notable flights performed by "gas-bags," as witness the cross-Channel flights of the Clement-Bayard and Lebaudy, the Cardiff

London flight by Mr. Willows in the tiny airship of his own construction, and his later flight to France. Also a good deal of excellent—if unpretentious—work has been done by the British Army authorities down at Aldershot. Against these undeniably meritorious performances have to be placed the handful of disasters that have overtaken the several types of dirigibles on the Continent.

In great measure the triumph of the aeroplane has been due to the vast improvements that have been effected in engine design since the opening of last year. The exigencies of the aeroplane render it necessary that engines should be of the lightest possible construction compatible with reliability, and it was in striving after this essential combination that the designers of early flight engines met with difficulties. Much has been learnt during the year of the many and complex problems confronting the designer in search of the ideal flight motor; and these lessons have been so intelligently applied that there are now engines suitable for the specialised work they are called upon to perform, and rapidly gaining that degree of reliability which characterises their heavier sisters of the car. When the year opened, it is not too much to say there was not a single British aviation motor that could hold its own with the best of the French products. Now, unless we are much mistaken, the position is quickly being reversed and the British motor is being brought on top. At the very least, credit may be taken by the home industry that it is producing motors fully equal to the best the world has to show.

In flying men, too, this country has been fortunate, for whereas a year ago she could not claim a single aviator of highest class, she now has several who can hold their own with the most finished exponents of France and America. True, with the exception of the Gordon-Bennett Trophy, Britain has won no first rank prizes; but in most cases she can claim that if her representatives were beaten they were not disgraced. It has to be remembered in this connection that the British flying school has been the growth of little more than a single year. In any case the representative flying men of this country have done well enough to spur the nation on to renewed efforts during the coming year.

Official Government Encouragement.

In one respect 1910 has seen Great Britain still lagging behind the nations in the race for the supremacy of the air. As we have taken occasion to point out at intervals during the year, the State has not done all that it might have been expected to do for the furtherance of the new science, especially when it is borne in mind that it introduces a new factor in the relations of the Powers upon which much may hang in the not distant future. The War Office, it is true, has continued its experiments with renewed energy as far as ever its funds have permitted; and with the assistance of private individuals has acquired the Clement-Bayard and Lebaudy dirigibles, while also taking a more or less dilettante interest in the aeroplane. In comparison with France and Germany, however, the home authorities have unquestionably cut a very sorry figure, keen as the actual personnel has undoubtedly been at Farnborough, Aldershot and Bushey to push forward at a far greater pace than authorised by the Government.

A gleam of hope has, on the other hand, appeared during the period under review, and, curiously enough, this has been brought about as the direct result of proposed International legislation affecting aviation. The British Government was actively represented at the International Conference that first met in May last, and was a party to the drawing up of the draft Convention that aimed at defining in black and white the elements of what International legislation will probably have to be on the subject of aerial craft. Postponement from May to December was largely brought about on the suggestion of the British delegates, on the ground that their Government desired time carefully to study for themselves the further points involved; while when the fresh sitting of the Conference fell due, postponement was again announced *sine die*. Apparently, in fact, the past year has not only witnessed the first practical attempt at the embodiment of an aviation convention in the Law of Nations, but it has brought home to the highest authorities in this Kingdom a recognition that the flying era has arrived, and that every wideawake country must either welcome it with open arms or fall lamentably behind in the struggle for supremacy.

CAPTAIN BERTRAM DICKSON.

IN the midst of a sad time in the aviation world it is pleasant indeed to record the satisfactory progress of at least one victim of the air. Captain Bertram Dickson, who, as our readers need no reminding, met with a collision while flying at the Milan Meeting last September, is now sufficiently convalescent from his serious injuries to be allowed to take a little exercise and receive an occasional visitor. It will be some little time, perhaps, before he is out and about again, but if appearances are any guide to health, he is certainly on the high road to speedy and complete recovery, which is not only a tribute to his extraordinary constitution, but is also by no means an incidental testimonial to the efficient and indefatigable nursing that he has received at the hands of his sister, Mrs. Will Gordon, who will be remembered as a regular visitor at most of the flight meetings that Captain Dickson attended. But for either one of three separate things, in the doctor's opinion, Captain Dickson would have succumbed had he been an ordinary man or been left to the good offices of the ordinary nurse, who in Italy, it seems, is strongly disinclined to sacrifice her Mass for her patient. Now, however, all that is over, and this country has been spared one of her best men, whose services, we hope, may long be devoted to the furtherance of the industry.

Captain Dickson's enthusiasm for aviation is unabated, but it is not now, and never has been, in any way akin to a mere love for sensation. In the early days of the modern movement he was attracted to flight even more as a science than as an art; but realising that it is essential not only to learn to fly but to possess a machine in order to find out all the details of such an elusive subject, he

took up the practice of aviation with characteristic thoroughness. One of the first Englishmen to become an expert pilot, he was also one of the first men in France to demonstrate that the engine could be stopped in mid-air without necessarily resulting in an accident. One very useful quality, which Captain Dickson has manifested at various times is that he has a good eye for a flyer and indeed at the time he bought his Farman with a Gnome motor he showed a foresight that was more than justified by the subsequent popularity and success of that particular combination. In the future we hope he will see fit to turn this and his other abilities—particularly his unique familiarity with the movement in France—to the advantage of the British industry. He is not a man whose work this country can afford to lose and if there is no longer any need for him to compete in actual flying with the younger men that is only the more reason why the fruits of his experience should be secured and he taken full advantage of in the future.

With regard to his accident, the curious will be interested to learn that, at the present moment, Captain Dickson has—as is not uncommon under similar circumstances—no recollection whatever of the occurrence. All he knows of the catastrophe is what he has been told, although on every other subject his mind is absolutely clear, and although it is only within the last few days, so to speak, that other incidents of the Milan Meeting have begun to reappear in his mental vision with anything like their natural colours. Therefore it may or may not be within his ability, later on, to gratify those who have embodied in their letters of sympathy a request for a personal account of the accident.



A 1910 ROLL OF HONOUR.—Some leading pioneers in aviation who, by their deaths when advancing the art, have paid the toll demanded by "Progress."

BARON DE FOREST'S £4,000 PRIZE.

Mr. Sopwith Secures the Prize.

ALTHOUGH several of the competitors kept their machines in readiness right up to the end of the year, none of them succeeded in bettering Mr. Thomas Sopwith's flight for the Baron de Forest's prize, and he has now been declared the winner accordingly by the Royal Aero Club. It will be remembered that on December 18th he flew from Eastchurch, across the Channel to Chirimont by Beaumont, in Belgium, a distance of about 160 miles. The only other competitor to cross the Channel was Mr. Cecil Grace, who so mysteriously disappeared while attempting to fly back from Les Baraques.

The Last Attempts to win the Prize.

By the elimination of Mr. Claude Grahame-White, by reason of his mishap, and the subsequent unfortunate burning of his second Bristol biplane, and by the retirement of Lieut. Watkins, consequent upon an accident while experimenting with Capt. Maitland's machine, the number of competitors was reduced to Mr. Loraine, Mr. Greswell, and Mr. Ogilvie. On the 28th ult. Mr. Loraine got his machine ready at Eastchurch in view of an attempt to cross the Channel, but engine trouble

intervened, causing him to delay his departure until the following morning. Then the weather conditions were again favourable, and the actor-aviator decided to make a preliminary trial before actually starting off. The engine, however, was again obstinate, and forced Mr. Loraine to land on bad ground, with the result that the machine ran into a dyke. The right-hand side of the main planes was badly damaged and Mr. Loraine was thrown out of his machine, but fortunately he escaped injury.

On the Friday, Mr. Ogilvie decided to make an attempt from Camber Sands, near Rye, but after travelling half a mile decided that the wind was against the success of the trip and so came down, the machine being somewhat damaged by a sudden landing. As a precaution in case of an involuntary descent while over the sea, Mr. Ogilvie attached to one of the struts of his machine a blue flare lifebuoy signal, which are arranged to come into operation on contact with water. On the instructions of Mr. Greswell, who had intended starting from Eastchurch on Mr. Grahame-White's new machine, tugs were kept in readiness to pilot him across on Saturday, but in view of a dense fog which crept up the Channel it was wisely decided to give up the attempt, so leaving Mr. Sopwith as certain winner in the contest.

THE BRITISH MICHELIN CUP.

IN our last issue we were able to give brief particulars of Mr. Alec Ogilvie's splendid try for the British Michelin Cup, and it seemed then not improbable that his fine record would not be beaten. Both Mr. Sopwith and Mr. Cody were not to be so easily deterred, however, and on Saturday, the closing day of the competition, Mr. Cody secured the leading position, giving him the right to hold the trophy for 1911, as well as the cash prize of £500. Just as in France, the competition on the last day proved an exciting one, for the three British flyers we have mentioned were making simultaneous attempts to secure the coveted trophy.

Mr. Cody's Winning Flight.

At 6.30 in the morning Mr. Cody was out on Laffan's Plain

waiting for the heavy mists to rise, but seeing no signs of a change he decided to start in spite of it. Owing to the intense cold, Mr. E. Leroy found it necessary to turn the propeller for over 25 minutes before the engine would start. After the first few laps Mr. Cody rose to between 600 and 700 ft. in order to get above the mist, but when he had been going for two hours he descended to about 80 ft. from the ground, as the wind was blowing very gustily, sometimes at over 20 miles an hour. The speed of the machine was considerably lessened after the first hour owing to the inlet-pipes being thickly frozen over, and, in fact, when Mr. Cody descended they were covered with ice a quarter of an inch thick.

It was a magnificent flight, and the machine flew perfectly smoothly, even in the wind, until the petrol supply was exhausted.



Mr. T. Sopwith, the winner of the Baron de Forest £4,000 Prize, on his E.N.V.-engined Howard Wright biplane during his second attempt at Brooklands for the British Michelin Prize. Note the *old* method of locomotion, the automobile stuck in the mud being assisted by the original "h.p.'s."

Had the whole distance flown over been reckoned, it would have come out at about 230 miles. Seventy-seven laps of 12,711 ft. each, the distance being officially recorded as 185.46 miles, and the time 4 hrs. 47 mins. Not only did Mr. Cody win the Michelin Trophy, but by this flight he also established an all-British record for duration and distance. Almost immediately after the flight Mr. S. F. Cody was offered considerably over £1,200 for the machine with which he established the record. This particular machine has now flown 1,230 miles since October 10th last (two and a half months), which in itself is a record.

The entire performance is indeed one upon which Mr. S. F. Cody must be heartily congratulated, for his win after so many strokes of ill luck is well deserved. He has worked long and patiently, and this demonstration of the capabilities of his machine, which was fully illustrated and described in our issues of Nov. 12th and 19th, reflects the greatest credit upon its designer and pilot, while a word of praise must also be extended to the makers of the British Green engine with which it was fitted. The engine ran regularly and without incident from start to finish, and in spite of the buffeting to which the aeroplane was subjected. This goes to prove that British flyers at last have at their disposal motors capable of, at least, holding their own against the foreign machines.

Mr. Sopwith's Final Try.

HAVING been displaced from the leading position by Mr. Alec Ogilvie, Mr. T. Sopwith determined not to let the prize slip from his grasp too easily. On the 29th, at Brooklands, he started off at 9 o'clock in the morning, but after going for a matter of two hours found a gusty wind made the conditions too trying, and so came down after covering just on 70 miles. The following day he was up at 8 a.m., but, curiously enough, again was beaten by the wind when nearly 70 miles had been traversed. On the Saturday he started off about twenty minutes to nine, but a necessary adjustment to the ignition brought him down after 17 miles. At twenty minutes to ten Mr. Sopwith was off again, and put up a splendid flight of over four hours, during which time he covered about one furlong over the 150 miles. This distance, although surpassing that of Mr. Ogilvie, was not sufficient to secure the cup, Mr. Cody having exceeded it by 30 miles or so. The course was a little over 1 mile 5 furlongs round, and 92 laps were made, the machine going on until the petrol was exhausted. The timing was done by Mr. G. F. Joseph, the Assistant Secretary of the Royal Aero Club. The Howard Wright machine used by Mr. Sopwith was the same which carried him across the Channel to Belgium in his try for the Baron de Forest prize, and was also used by him for his magnificent first attempt for the Michelin Cup. This machine was fully described in our issue of December 24th, while the E.N.V. engine, which ran so splendidly, was also described in these pages on October 15th last.

Mr. Alec Ogilvie's Second Try.

MR. OGILVIE was the victim of very hard luck, because although his flight of 140 miles on the previous Wednesday gave him the leading position for the time being, he could have continued for very much longer but for the fact that a serious leak developed in the water system, while on Saturday last at Camber Sands he was



Mr. Alec Ogilvie returning to his quarters after he had his slight mishap during a flight last week.

compelled to come down owing to faulty ignition after covering 55 miles in about an hour and a half. Mr. Ogilvie's two flights are particularly interesting for those watching the all-British side, for the British built Short-Wright biplane used was fitted with the first of the new type two-stroke N.E.C. engines described in our issue of the 24th ult.

The Previous Record.

AS the British Michelin prize was only offered at the end of March, 1909, the first competition did not close until March 31st, 1910, when the Trophy and cash prize of £500 was awarded to Mr. J. T. C. Moore-Brabazon for his flight of 19 miles in 31 mins. on a Short biplane at Eastchurch on March 1st, 1910.



Mr. Alec Ogilvie making his flight of 140 miles in 3 hrs. 55 mins., for the British Michelin Cup on his British-built N.E.C.-engined Wright flyer, on Camber Sands last week.

FRENCH MICHELIN CUP.



M. Tabuteau, the winner of the French Michelin Aviation Cup for 1910.—He covered approximately 365 miles in 7 hrs. 48 mins. on his Henry Farman biplane, Renault motor.

JUST as was the case in England, the closing days of the competition for the International Michelin Cup in France provided quite a deal of excitement. The Cup is awarded for the longest distance flown without a stop. On the last day of the year no less than five French aviators set out to try and beat the record made on the previous day by Tabuteau, but without success, and the latter's record of 584'935 kiloms. in 7h. 48m. 31½s. therefore secured to him the right to hold the Cup for the ensuing year.

Real Contest Begins.

On the 29th ult. the attempts commenced in real earnest. At Buc, Tabuteau set out to regain the world's record on his Maurice Farman machine, but after he had traversed a distance of 400 kiloms. he was compelled to come down by the thick mist. His time for 390 kiloms. was 5h. 12m. 49½s. At Etampes Henry Farman also made another attempt to place the record to his credit. Starting off at eight o'clock in the morning, he was flying until half-past ten, by which time a distance of about 150 kiloms. had been covered, his speed being about 63 kiloms. an hour. Then, in view of the way in which the rain, which had been falling for some time, was freezing on the upper plane of his machine, he decided that it was useless to continue, and came down. On landing, it was found that the ice which had gathered on the plane was very little short of 80 kilogs. in weight.

The Winning Flights and New Records.

As we have mentioned above, the winning flight for the Cup was made on the 30th ult. at Buc. At twenty minutes to eight Tabuteau started off in very cold but fine weather, determined to remain in the air until he had beaten all records. He had been circling round and round the course for nearly an hour when his friend Renaux also took the air. He, however, only continued for about five hours, when finding that Tabuteau had apparently got his task well in hand, he decided to come down. He did not travel quite so fast as Tabuteau, his time for 350 kiloms. being 4h. 56m. 43½s. Tabuteau continued on his course until twenty minutes past three, when having ascertained that he had well beaten the distance record, he decided to descend, although he could have gone on for an hour or so more. He had then been in the air 7h. 48m. 31½s., and had covered 584'935 kiloms. (365 miles), beating the previous best record

by Legagneux by just on 40 miles. The flight was timed by Gaudichard, and officially observed, on behalf of the Aero Club of France, by M. Fournier. In the course of his flight, Tabuteau set up a new record for 500 kiloms. in 6h. 41m. 1½s., and also a new record for 7 hrs. of 522'935 kiloms., while his time for 550 kiloms. was 7h. 19m. 41½s.

On the same day Thomas made a fresh attempt on his Antoinette monoplane at Mourmelon. He, however, was flying very low, and after being in the air for 3h. 5m. 4s., one of the wings of his machine touched the ground in making a turn, and the official observers were obliged to count that as the termination of the flight. By that time a distance of 262 kiloms. had been covered, and the world's record for 250 kiloms. beaten.

The Last Day.

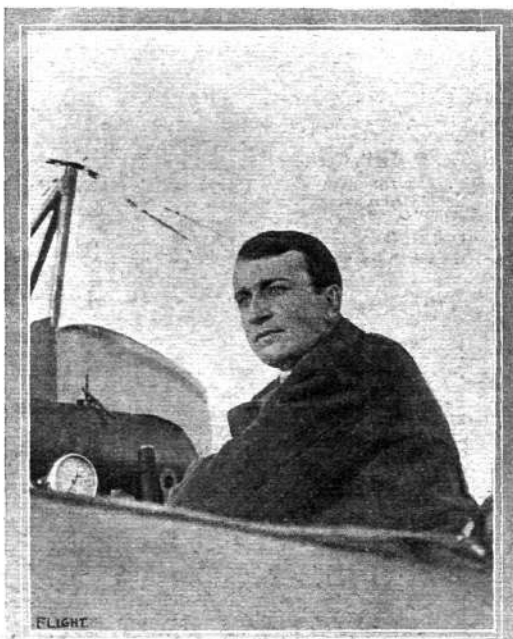
As we have noted above the closing day, December 31st, witnessed five aviators starting off on attempts for the prize. Henry Farman was the first in the air, and at Etampes he circled round the flying ground for 7 hrs. 11 mins., covering 487 kiloms., after which he was obliged to land owing to the breaking of a lubricating pipe.

This splendid failure was equalled by a meritorious flight made at Buc, where Pierre Marie on his R.E.P. monoplane succeeded in covering 530 kiloms. in 6h. 29m. 19½s., when he was obliged to land owing to his petrol giving out. Incidentally he set up new records as follows:—250 kiloms., 3h. 4m. 28s.; 300 kiloms., 3h. 40m. 55½s.; 350 kiloms., 4h. 17m. 26½s.; 400 kiloms., 4h. 54m. 6½s.; 450 kiloms., 5h. 30m. 35½s.; 500 kiloms., 6h. 7m. 7½s.

At Douai, where he had been engaged in practising for two days, Breguet started off at a quarter past ten after a preliminary spin of five rounds of the aerodrome and was flying for 5h. 2m. 41s., covering a distance of 390'42 kiloms., when the cracking of one of the cylinders of his engine caused him to come down.

At Douzy Sommer set off on his biplane at 10 o'clock to try for the prize, but after he had been going for 2 hrs. 40 mins. his carburettor froze up and he was compelled to land.

At Pau, Legagneux set out to regain the world's distance record, but the elements were against him. The violent wind made the task



Pierre-Marie, who, at Buc on December 31st, on an R.E.P. monoplane, in an attempt to secure the French Michelin Prize, covered 530 kiloms. in 6h. 29m. 19½s. Although he put up some new speed records, the cup was secured by M. Tabuteau.

an unenviable one, but in spite of the adverse conditions the plucky aviator kept going for 2 hrs. 20 mins., by which time he had covered some 295 kiloms., when he decided to finish. By the bitter irony of fate he had only been out of his machine a few minutes when the sun commenced to shine brilliantly and the weather conditions moderated, but by that time it was too late to make a fresh start.

Thomas had intended to make another try at Mourmelon, but as his machine was not quite as he would have liked it, he determined to withdraw from the competition.

One of the last entrants was Illner, who proposed to make his attempt at Vienna on one of the Etrich monoplanes, under the observation of the Austrian Aero Club, but he was unable to get his machine ready in time to make such a long flight.

For the year 1911 therefore the honours will rest with Maurice Tabuteau and Maurice Farman, the constructor of the biplane, while the Renault Frères, the makers of the motor, also share in the credit attaching to this victory in the 1910 Coupe Michelin competition, which has been more keenly contested than in the two previous years.

Previous Records.

In the initial year of the competition the Cup was won by Wilbur Wright at Auvers Camp with a flight of 124.7 kiloms. in 2h. 20m. 31s. made on December 31st, 1908, while last year Henry Farman was the holder, his winning flight of 234.212 kiloms. in 4h. 17m. 32.8s. being made at Chalons Camp on November 3rd, 1909.

During the twelve months of 1910 the records for the Cup have been beaten five times. Simon, on his Blériot at Bordeaux, was the first to take the lead. He was displaced by Aubrun, who, during the continuance of the same meeting, flew 315 kiloms. The next change occurred at the Rheims Meeting, when René Labouchère secured first position with 340 kiloms., although Olieslaegers had flown 392 kiloms.; but he was not qualified, not being a member of a recognised national club. The next change was when Tabuteau covered 465.72 kiloms. in 6h. 1m. 35s. at Etampes, a feat which narrowly escaped being beaten by Henry Farman's 463 kiloms. in 8 hrs. 12 mins. at the same place. Lastly, Legagneux passed the 500 kilom. mark by covering 515 kiloms. in 5 hrs. 59 mins. on a Blériot machine at Pau, only to be beaten by the performances detailed above.



GRAND PRIX A.C.F.: PARIS—BRUSSELS—PARIS.

A.C.F. Grand Prix goes to Wynmalen.

QUITE a deal of argument, protesting, and counter-protesting has been saved by the fact that no aviator other than Wynmalen succeeded in completing the course from Paris to Brussels and back for the £4,000 Grand Prix offered by the Automobile Club of France. It will be remembered that on October 16th the Dutch aviator Wynmalen, accompanied by Louis Dufour, succeeded in accomplishing this task in 27 hrs. 50 mins.; but inasmuch as the start was not timed by the actual A.C.F. official timekeeper appointed by the Club, it was decided to only credit Wynmalen with the maximum time of 36 hrs. This action was protested against by the Dutch Aero Club, it being urged on behalf of Wynmalen that he had taken extraordinary pains to get the timekeeper to his post, but all to no purpose; and he, therefore, had his time and start vouched for by another duly credited timekeeper of the Club. The dispute has, however, now been automatically settled, and the prize will be awarded to Wynmalen.

Altogether, eleven attempts were made to win the prize, the pilots being as follows: Mahieu (Henry Farman), two attempts;

Loridan (Henry Farman), two attempts; Wynmalen (Henry Farman); Legagneux (Henry Farman), two attempts; Tabuteau (Maurice Farman); Lanser (Henry Farman), two attempts; Laffont (Antoinette).

Of the unsuccessful competitors it should be noted that Legagneux twice succeeded in reaching Brussels, and on the first occasion got as far back as St. Quentin on the return journey. On the second trip he was detained at Brussels by a gale until too late to start in order to regain Paris within the maximum time for the round trip of 36 hours. A like fate befell Mahieu, who also completed the outward journey to the Belgian capital. Of the others the only one to get any appreciable distance was Lanser, whose trip is described below.

Lanser's Last Attempt for the Grand Prix.

NOTWITHSTANDING the fact that on the previous day he had been an eye-witness of the fatal accident to Laffont and his passenger, the Belgian aviator Lanser determined to make a second attempt for the A.C.F. Grand Prix on the 29th ult. Accompanied by M. Panier, the aviator started off from Issy at half-past nine, having



Mlle. Herveu being "chaired" by her admirers at Pau after her fine flights on a Blériot for the Coupe Femina, when she was flying for 1 hr. 15 mins. and 2 hrs. 2 mins., having in the end, however, to cede first place to Mlle. Dutrieu with her 167.2 kiloms. in 2 hrs. 35 mins.

waited for a shower of rain to cease. All went well for the first part of the journey and St. Quentin was reached soon after noon. There a landing was made in order to replenish the petrol tank, &c. The aviator reported that during the last part of the journey the mist had made the trip none too easy, but after only half-an-hour's delay they restarted. The fog, however, got denser, and after only covering a couple of kilometres Lanser deemed it prudent to come down at Rouvroy, hoping that the fog would lift and allow him to go on later. Unfortunately this did not happen, and the next morning the wind rendered continuance of the journey out of the question, and so the two flyers determined to withdraw from the competition. They, however, determined to continue their journey to Brussels on the 31st ult., and landing *en route* at Mons, eventually reached the Belgian capital "*par la voie des airs*" without mishap.

The Fatal Accident to Laffont.

UNFORTUNATELY, the competition for the A.C.F. Grand Prix has been marred by a fatal accident by which both the pilot and the passenger were killed. The pilot was Laffont, who had been remarkable for his careful and steady flying of the Antoinette mono-



The Lazare Weiller Prize.

ANOTHER competition which closed with the end of the year was that for the Lazare Weiller Prize of £1,000 for cross-country flying by French officers in uniform and carrying a passenger. The winner was Lieut. Cammerman, who, accompanied by Capt. Hugoni, on December 21st last, as already recorded in FLIGHT, flew from Bouy to Montigny-sur-Aube and back, a distance of 232 kiloms., in 4h. 2m. 30s.

A last attempt to win the prize was made by Lieut. Delage on the 29th ult. when, leaving Etampes, he flew accompanied by Lieut. Maillons to Orchaize, a distance of 106 kiloms., in 3 hrs. 31 mins. The journey was a most trying one and it speaks well for the endurance powers of the two officers that they kept going as long as they did. During the journey they passed through a snow-storm and their slow progress was in some measure due to the load of snow and ice which they "picked up" on the way, while the flight was finally brought to a conclusion through the carburettor freezing up. It will be remembered that the first flight in the competition for the Cup was made by Lieut. Delage some time ago when he flew from Etampes to Blois and back, a distance of 204 kiloms., in 3 hrs. 16 mins., his passenger then being Lieut. Maillons.



Lieut. Cammerman, winner of the Lazare Weiller Cross-Country Prize for French officers, on his Henry Farman biplane, Gnome motor. Lieut. Cammerman's flight was Bouy—Montigny-sur-Aube—Bouy, 232 kils. in 4h. 2m. 30s.

plane. He had succeeded Labouchere as the chief instructor at the Antoinette School at Mourmelon, and had been persuaded by one of his pupils—Mario Pola, a young Spanish sportsman—to make an attempt for the Paris to Brussels flight. The machine, which belonged to the latter, was taken to Issy, and on the 28th ult. a start was decided upon. Upon testing the engine this did not give satisfaction, but after adjusting everything was pronounced to be ready. Laffont took the machine up for a short trial flight, and as everything seemed to be right the passenger took his place, and the two aviators set off for a preliminary turn round the aerodrome. Three circuits had been covered, and the fourth was just being commenced when the machine swerved towards the centre of the ground, and although the aviator was obviously struggling to regain control of the aeroplane, one of the planes became detached, and the machine fell rapidly to the ground from a height of 500 ft. Both the occupants were killed instantly, while the machine was simply a mass of twisted iron and splintered woodwork. The cause of the disaster is unknown, but some of the aviators who witnessed the mishap give it as their opinion that it occurred through the steering wires becoming jammed.



Coupe Femina.

THE competition for the Coupe Femina closed on the last day of 1910, and although Mme. Niel, Mdle. Marvingt and Mdle. Herveu had announced their intention of trying for the cup none of them ventured aloft, and so Mdle. Dutrieu's record of 167.2 kiloms. in 2 hrs. 35 mins. was sufficient to easily secure for her the cup. It will be remembered that the first try for the prize was by Mdle. Marvingt, who at Mourmelon flew for 53 mins. on her Antoinette, covering 43 kiloms. This was bettered by Mdle. Dutrieu, who on her Henry Farman biplane flew 60 kiloms. in 1 hr. 9 mins., and later again bettered this with the record mentioned above. Mdle. Herveu, on her Blériot, at Pau, flew for 1 hr. 15 mins. and also 2 hrs. 2 mins., while Mdle. Marvingt, on a second trial, only kept going for 45 mins.

On the 29th ult. Mdle. Dutrieu tried at Etampes to better her own record, but after flying for 40 mins. the mist became so thick that she had to give up.



Mdle. Helene Dutrieu, winner of the "Femina Cup" for lady flyers, in counsel with Mr. Henry Farman prior to her record flight at Etampes on her Henry Farman (Gnome motor), of 167.2 kiloms. in 2 hrs. 35 mins.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

Annual Dinner.

THE ANNUAL DINNER will take place at the PRINCE'S RESTAURANT, Piccadilly, London, W., on TUESDAY, JANUARY 31st, 1911, at 7.30 for 8 o'clock.

The following prizes won during the year will be presented:—

The cash prize of £1,000 attached to the Gordon-Bennett Aviation Trophy to C. Grahame-White.

The Baron de Forest £4,000 prize to T. Sopwith.

British Empire Michelin Cup and cash prize £500 to S. F. Cody.

Royal Aero Club Challenge Cup to Hon. Mrs. Assheton-Harbord.

Members will receive a special circular dealing with the annual dinner, and in order to facilitate the arrangements they are requested to notify the Secretary as early as possible if it is their intention to be present. Members may be accompanied by ladies.

Tickets (inclusive of wines, cigars, &c.):—

Gentlemen ... £1 7s. 6d. Ladies ... £1 1s. 0d.

Committee Meeting.

A meeting of the Committee was held on Tuesday, January 3rd, 1911, when there were present:—Mr. Roger W. Wallace, K.C. (in the Chair), Mr. Griffith Brewer, Mr. Ernest C. Bucknall, Prof. A. K. Huntington, Mr. F. K. McClean, Mr. J. T. C. Moore-Brabazon, Mr. C. F. Pollock, Mr. Stanley Spooner, and Harold E. Perrin, Secretary.

The Late Mr. Cecil S. Grace.—Before proceeding with the formal Committee business, the Chairman referred to the grievous loss sustained by the Club and the Committee by the untoward death of Mr. Cecil Grace, and the following resolution of sympathy was unanimously passed:—

"The Committee of the Royal Aero Club desires to express its deep sorrow at the sad loss of Mr. Cecil S. Grace, and its high appreciation of his great services to the aeronautical movement and to the Club. The Committee further desires to tender its sincere sympathy to the members of his family upon the heavy bereavement they have sustained."

The following letter has been received from the Aero Club de France:—

"Aero Club de France."

"December 28th, 1910.

"SIR,—It is with the most sorrowful emotion that we have learnt at the Aero Club de France that all hope has been lost of finding Mr. Grace, who had made one successful crossing of the Channel.

"Under these circumstances we beg you to transmit to our colleagues of the Royal Aero Club the expression of our most cordial sympathy, and we still venture to hope that he has been rescued.

"We are, &c.,

(Signed) "GEORGES BESANCON, General Secretary."

Accidents Abroad.—Messages of condolence were ordered to be sent to the Aero Club of America and to the Aero Club of France respectively expressing sympathy with them in the losses they have recently sustained by the fatal accidents to J. B. Moisant and A. Hoxsey and to Lieut. de Caumont and M. Laffont.

New Members.—The following new members were elected:—

M. S. Abrahams.	Engineer-Lieut. Walter R.
Lieut. John Tremayne Babington, R.N.	Parnall, R.N.
Lieut. R. A. Cammell, R.E.	Arthur S. Rogers.
William Francis de Hevesy.	Lieut. C. R. Samson, R.N.
Alan H. H. Gardner.	Capt. W. Shakespeare.
Charles L. E. Geach.	James D. Small.
Cleveland R. Grace.	S. B. Smith.
John Hirst, B.A.	Lieut. Edward C. Watson,
Archibald Reith Low.	R.N.
Lieut. Cecil L'Estrange Malone, R.N.	Washington Wood.

Aviators' Certificates.—The following Aviators' Certificates were granted:—

39. B. G. Bouwens.

40. Lieut. G. B. Hynes, R.G.A.

41. St. Croix Johnstone (subject to approval of Aero Club of America).

42. Major H. R. Cook, R.G.A.

43. B. H. Barrington Kennett.

44. P. G. L. Jezzi.

45. Lieut. Cammell.

Baron de Forest Prize.—The Committee considered the records made in the above competition, and awarded the prize of £4,000 to T. Sopwith, whose journey from Eastchurch to Thirimont in Belgium, a distance of 169 miles, was the longest flight accomplished.

The following are the specifications relating to his machine:—Type, Howard Wright biplane; motor, 60-h.p. E.N.V. (British); carburettor, White and Poppe; magneto, English Bosch; sparking plugs, Lodge; propeller, Howard Wright; tyres, Dunlop.

The official at the start was Mr. J. L. Travers, junr., of the Royal Aero Club, and the landing was certified by responsible persons at Thirimont.

The only other competitor who fulfilled the condition of crossing the Channel was the late Mr. Cecil S. Grace, who, starting from Dover, on a Short biplane, landed at Calais.

On December 31st, 1910, Baron de Forest deposited at the Royal Aero Club a cheque for £4,000 in payment of the prize, and he has kindly agreed to make the presentation on the occasion of the Annual Dinner.

British Empire Michelin Cup.—The Committee received the following official reports relating to the above competition:—

November 4th, S. F. Cody, Laffan's Plain. 94½ miles in 2 hrs. 24½ mins. Official Observer, Capt. P. W. L. Broke-Smith, R.E.

November 26th, T. Sopwith, Brooklands. 107½ miles in 3h. 12m. 50s. Official Observers, Harold E. Perrin and R. Wherry Anderson.

December 22nd, S. F. Cody, Laffan's Plain. 114 miles 1,232 yds. in 2 hrs. 50 mins. Official Observer, Lieut. A. G. Fox, R.E.

December 28th, Alec Ogilvie, Camber. 142 miles 42 yds. in 3 hrs. 55 mins. Official Observer, Joseph Cundell.

December 31st, T. Sopwith, Brooklands. 150 miles 246 yds. in 4h. 7m. 17s. Official Observers, G. F. Joseph and E. V. Sassoon.

December 31st, S. F. Cody, Laffan's Plain. 185 miles 787 yds. in 4 hrs. 47 mins. Official Observer, Lieut. A. G. Fox, R.E.

The Committee, after a careful examination, declared S. F. Cody to be the winner in respect of his flight of 185 miles 787 yards, on Saturday, December 31st, 1910.

Other flights of smaller mileage were made by competitors, but the necessary reports were not sent to the Club.

The following are the specifications relating to the machines:—S. F. Cody.—Type, Cody biplane; motor, 50-60-h.p. Green; carburettor, Green; magneto, English Bosch; sparking plugs, Pyramid; propeller, Cody; tyres, Dunlop.

T. Sopwith.—Same machine as used in Baron de Forest Competition. Particulars as given above.

Alec Ogilvie.—Type, Short-Wright; motor, 40-h.p. N.E.C.; carburettor, N.E.C.; magneto, English Bosch; sparking plugs, Pognon; propeller, Short; tyres, Dunlop.

Observers.—The Committee of the Royal Aero Club wishes to express its best thanks to the following gentlemen who assisted in the recent competitions and devoted so much time and trouble to observing the flights:—

Mr. R. Wherry Anderson.

Mr. Arthur Bonsor.

Mr. Griffith Brewer.

Capt. Broke-Smith.

Mr. Ernest C. Bucknall.

Lieut. R. A. Cammell, R.E.

Mr. Joseph Cundell.

Mr. F. W. Duckham.

Lieut. A. G. Fox.

Major W. E. Lees, R.E.

Capt. I. O. H. Moore.

Mr. E. V. Sassoon.

Capt. Smart.

Mr. J. L. Travers, junr.

British Records.—The Committee accepted the following all-British records made by S. F. Cody at Laffan's Plain on December 31st, 1910:—

Duration, 4 hrs. 47 mins. Distance, 185 miles 787 yds.

Cody biplane; 50-60-h.p. Green motor.

British Passenger-carrying Record.—M. Ducrocq, Brooklands, December 31st, 1910, with one passenger:—

Distance, 48 miles 1,553 yds. Duration, 1 hr. 11 mins.

Farman biplane; Gnome motor.

Future Aviation Competitions.—The following resolution was unanimously passed:—

"All aviation competitions for the best performance within any period shall in future terminate not later than October 31st in any year."

Royal Aero Club Challenge Cup.—This Cup for the longest flight by balloon, airship or aeroplane in 1910, was awarded to the Hon. Mrs. Asheton-Harbord for a balloon voyage of 351 miles from Battersea to La Chartres on December 18th, 1910.

Federation Aeronautique Internationale.

The extraordinary Conference of the Federation Aeronautique Internationale will be held in Paris on Tuesday, the 10th inst., and delegates will attend from the Royal Aero Club and its associated Clubs. The business to be dealt with includes the protest of the Royal Aero Club against the award of the Aero Club of America in the Statue of Liberty Competition, and the fixing of the regulations for the Gordon-Bennett International Aviation Race to be held in England this year.

Gordon-Bennett Aviation Cup.

The Cup, having been won last year by Mr. C. Grahame-White, the nominee of the Royal Aero Club, the race for 1911 will be held in England. The exact date and place will be announced later.

An Extraordinary Conference of the Fédération Aéronautique Internationale will be held in Paris on January 10th to determine the special regulations to govern the contest for 1911.

Each Club forming part of the Fédération Aéronautique Internationale has the right of challenging the holder, the Royal Aero Club, and such challenge must be received before March 1st, 1911.

The Committee of the Royal Aero Club will select the three competitors and reserves representing the United Kingdom. Intending competitors are requested to notify the Secretary on or before February 28th, 1911, of their willingness to compete if chosen. Applications must be accompanied by a cheque for £20, the entry fee, which amount will be returned should the competitor not be selected.

Candidates must be members of the Royal Aero Club.

The Aero Club of America has sent in a formal challenge for the International Competition this year. They will be represented by three competitors whose names will be announced later.

Gordon-Bennett Balloon Contest.

The Cup having been won last year by the Aero Club of America, the race this year will be held in America. The exact date and place will be announced later.

Each Club forming part of the Federation has the right of challenging the holder, the Aero Club of America, and such challenge must be sent in not later than February 1st.

The Committee of the Royal Aero Club will select the competitors to represent the United Kingdom, and intending competitors are requested to notify the Secretary on or before January 24th, 1911, of their willingness to compete if chosen. Applications must be accompanied by a cheque for £20, the entry fee, which amount will be returned should the entry not be accepted.

International Aero Exhibition at Olympia.

The International Aero Exhibition held by the Society of Motor Manufacturers and Traders under the auspices of the Royal Aero Club, will take place at Olympia, opening on Friday, March 10th, 1911, and terminating Saturday, the 18th.

Full particulars can be obtained on application to the Exhibition Manager, Society of Motor Manufacturers and Traders, Maxwell House, Arundel Street, Strand, London, W.C., or the Secretary, Royal Aero Club, 166, Piccadilly, London, W.

In connection with the Exhibition it is proposed to organise an exhibit of model flying machines. Space will be given free, and the Royal Aero Club will erect suitable stands and provide the necessary attendants. In order to partly cover this expense a charge of 10s. will be made for each model exhibited. It is proposed to award Medals and Cash Prizes.

Presentation of Picture.

Mr. W. G. Cuthbert-Gundry has kindly presented to the Club a coloured engraving dealing with "Aerostation."

Rolls Memorial Library.

Herr Gustav Braunbeck has presented, through the Royal Automobile Club, a copy of his "Sport-Lexikon" to the Rolls Memorial Library.

HAROLD E. PERRIN.

Secretary.

166, Piccadilly.

PROGRESS OF FLIGHT ABOUT THE COUNTRY.

NOTE.—Addresses, temporary or permanent, follow in each case the names of the clubs, where communications of our readers can be addressed direct to the Secretary. We would ask Club Secretaries in future to see that the notes regarding their Clubs reach the Editor of FLIGHT, 44, St. Martin's Lane, London, W.C., by first post Tuesday at latest.

Aeronautical Society of G.B. (53, VICTORIA STREET, S.W.).

The following arrangements have been made for 1911:—
January 11th, at 8 p.m.—"Aeroplane Surfaces and Controls; with some Remarks on Chassis." Lecture by Mr. H. F. Lloyd at the Northampton Polytechnic Institute.

January 18th, at 8 p.m.—"The Motive Power in Aeroplanes." Lecture by Captain A. D. Carden, R.E., at the Northampton Polytechnic Institute.

January 25th, at 8 p.m.—"Lines of Aeronautical Research." Lecture by B. G. Cooper at the Northampton Polytechnic Institute.

January 28th.—Visit to the National Physical Laboratory at Teddington.

February 14th.—"The Pressure on Planes and Curves." Lecture by F. Handley Page at the Royal Society of Arts.

The annual general meeting, at which the president, vice-presidents, council and officers for 1911 will be elected, will be held in March. Notice of the date will be given in due course.

Birmingham Aero Club (165, HAMPTON STREET).

A MISTAKE having been made in the date, all members, including those who have been members for any one of the past five quarters, are asked to attend the annual meeting of the club at the workshop at 8 p.m. on Tuesday, January 10th. Gentlemen thinking of joining as members are also invited to attend.

East London Aero Club (ALEXANDRA HOTEL, STRATFORD, E.).

A general meeting of the club was held at headquarters on December 31st last, when Mr. F. C. Longford presided.

The chairman expressed great satisfaction at addressing such a large and enthusiastic audience, which, he said, clearly indicated that the club had taken a hold upon the young men of the locality, and had come to stay.

The record of the month's progress, read by the hon. secretary, also further proved the chairman's opening remarks, the number of new members enrolled being very satisfactory.

The election of the officials was then proceeded with and the following were elected unanimously:—Chairman, Mr. F. C. Longford. Committee, Messrs. E. Niel, J. Brown, R. Bechley, F. Gunton, E. H. Lancaster, A. C. Brown, A. Davidson, A. Hind, J. May, H. Stone and H. Groome. Hon. treasurer—Mr. W. D. Knox. Hon. secretary—Mr. E. Sissons.

The secretary, in outlining the future work of the club, referred to the lectures, the library, and the proposed workshop. He appealed to every member to attend the four lectures arranged for January, and endeavour to increase the membership by interesting friends in aviation.

The following are the subjects to be dealt with on the respective Saturdays:—

- Jan. 7 ... "The Early History of Aviation."
- Jan. 14 ... "Biplanes and Monoplanes."
- Jan. 21 ... "Practical Model Aeroplanes."
- Jan. 28 ... Lantern Lecture: "The Progress of Aviation."

The lecture of January 7th will be open to the general public.

SCHOOL AERO CLUB.

Arundel House School A.C. (15, ARLINGTON ROAD, SURBITON)

DURING the last fortnight of 1910 some remarkable flying was achieved by R. F. Mann with his improved model, the "Mann" monoplane No. 25. Operations were greatly hindered by the inclement weather prevailing, but in spite of this serious disadvantage quite a number of exceptionally fine flights were accomplished. The finest from a spectacular point of view took place on Wednesday, December 28th, when the "Mann" machine covered a complete semicircle, the chord of which measured from starting to landing place was considerably over 800 feet. The total distance flown on this occasion was obviously well over the quarter mile. On Saturday, December 31st, R. F. Mann succeeded in raising the club duration record to 55 secs., and also broke the record for altitude, a height of approximately 100 ft. being attained.

FROM THE BRITISH FLYING GROUNDS.

Royal Aero Club Flying Ground, Eastchurch.

DURING the latter part of December the Dunne machine met with an unfortunate accident. Barton, who was flying the machine, attempted to turn sharply while near the ground. The front skid broke off short, and caused the machine to turn completely over. Fortunately Barton was wearing a helmet at the time, which undoubtedly saved his life, he escaping with a few bruises and shock only. The machine was a total wreck.

In the Christmas week, Robert Loraine made a few practice flights on the Friday morning, on his Howard Wright biplane, and was out again the following Monday trying some alterations.

It is very hard to realise that Grace is gone, as he was one of the first to start here, and has been at Eastchurch continually since, practising, training, working scientifically and practically, with a quiet enthusiasm and devotion that should be a model for future aviators. So thorough was he in his methods that it was not sufficient for him to read some theory in a book, he would attempt to prove it, or disprove it, for himself in the air.

On Thursday the 29th ult., Loraine started out about 11 a.m. but his engine failing he was forced to land just outside the flying ground; unfortunately he was unable to prevent his machine running into a dyke, his machine being badly damaged. At 3.30 Greswell made a trial flight on his Bristol biplane, which is fitted with an E.N.V. engine, making three fine flights, on the last attaining a height of 300 feet.

On Friday, the 30th, Greswell was at 10.30 out again practising with extensions fitted. The machine appeared to be flying with the tail very high and Greswell complained that he could not rise. He afterwards made a number of short flights. Jezi came out at 3.15 and after a preliminary trial flew the necessary three flights for his certificate. On a further flight he ran short of petrol and made an involuntary *vol plané* in good style from a height of 50 feet, but by ill chance he happened to be outside the flying ground, and like Loraine, ran into a ditch before he could turn. There seems to be a real need for brakes, or better still some system of drawing up the wheels so that the skids alone take the weight after the first shock of landing. On Saturday, the 31st, Greswell made several practice flights but the fog was so thick that a start for the Channel flight was out of the question.



Mr. Morrison, who, on his Blériot last Saturday, made such fine flights from Brooklands over Weybridge, reaching an altitude of about 1,000 ft.



Mr. Maurice Ducrocq flying on a Henry Farman at Brooklands in an attempt upon the 100 Miles Passenger-carrying Record. Note the boy scout in charge of one of the lantern-bedecked "mark-posts" of the course.

Brooklands Aerodrome.

Mr. SOPWITH, having on his Howard Wright gained the Baron de Forest Prize, and incidentally £4,000 of the best, hurried his machine back home. He had heard that Mr. Ogilvie threatened his position for the Michelin Cup by flying 130 miles at Rye in 3 hrs. 55 mins. on the 28th.

He made an attempt on the 29th to lower this record. Weather conditions, however, proved unfavourable, as starting early in the morning, after 67 miles he was obliged to descend owing to the increasing wind. Again on Friday he had a try, flying 65 miles, and again from the same cause he was obliged to give in. Nothing daunted, Saturday morning saw him once more soaring aloft with conditions more favourable, no wind, but rather foggy and very damp. He started at 9.40 and remained in the air until 1.48, circling the aerodrome steadily for 92 circuits, covering 150 miles 1 fur. 26 yds. 2 ft., being away from Mother Earth for 4h. 7m. 17s., as against Mr. Ogilvie's 139 miles. Mr. Sopwith took up sufficient petrol for 150 miles' flight, and only coming down when his petrol was finished. It was, therefore, pretty hard luck for him that at the same time the prize was being taken from him by Mr. Cody on Laffan's Plain, who put up 185 miles 787 yds. in 4 hrs. 47 mins.

Sharing the honours of the week with Mr. Sopwith is Mr. Morrison in his daring high flying. In skill and technique his handling of his Gnome-Blériot is equal to the best Continental exponents, whilst the angle at which he rises must be close on 15°, and is certainly greater than was noticed at Rheims last year when Cattaneo made his name for his rapid ascents.

Mr. Morrison rises in a few minutes to close on 2,000 feet, and makes a short cross-country flight. Maintaining his altitude he shuts down his engine, descending in a spiral, after the most approved—and dangerous—method. The only other flights of interest this week were provided by M. Blondeau on his Henry

Farman, who was carrying a lady passenger, and Mr. Ducrocq on his Henry Farman racer and Mr. Roe on his Avroplane. Mr. Ducrocq was out this time for a new British record for passenger carrying, and, under observation by the Royal Aero Club, he succeeded in establishing one for a distance of 48½ miles in 1 hr. 11 mins.

The rhomboidal aeroplane, which has been described in a previous issue, has reached the stage of engine-testing, so should soon be seen on the ground. As this machine is being kept very secret, its advent to the "critical light of day" is awaited with interest by the tenants here.

Mr. Hammond's "mono-bi-triplane" has at length also reached the engine-testing stage. This machine is certainly a marvel of light construction, so light indeed that it looks at first sight quite inadequate to support the weight of engine and aviator, to say nothing of landing in the ever popular sewage farm. We hope he will surprise the tenants, who appear in the meantime to be somewhat sceptical.

From the Howard-Handers shed we hear rumours of automatic balance, which will gladden the heart of Mr. H. G. Wells (*vide Express*, January 3rd).

Laffan's Plain.

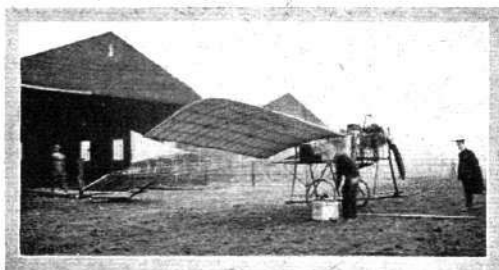
ON Tuesday, December 27th, Mr. Cody flew 68 miles, but a strong wind prevented him from establishing a third record in connection with the Michelin Cup. In the early morning he discovered numerous leaks in the radiators, caused by the frost, in consequence of which it was found necessary to change both radiators and fittings—a matter which took over four hours, and it was not until one o'clock that the machine was ready. As it was, starting at 1 p.m., it was necessary to descend after a 68 mile flight on account of the wind.

The next morning Mr. Cody narrowly escaped a serious accident. The wind was so strong that it forced the machine downwards to such an extent that in one instance the wheels and the tail-skid brushed along the top of a clump of trees. Happily the branches yielded, and the machine landed, after an 8 mile flight, without any damage.

London Aerodrome, Collindale Avenue, Hendon.

ON Wednesday of last week a good deal of work was going on. Three of the Blériot pupils, namely, Mr. Bouwens, Lieut. Hynes, R.G.A., and Mr. Johnstone, qualified for their certificates in the one day, after waiting for about three weeks for a decent chance in fair weather. The "Valkyrie" also made a fine flight of about an hour, and Mr. Dimmock took his first lesson on this machine.

Mr. Barber, on the Valkyrie machine, made a flight of about 35 minutes, and the machine was also flying on the following day. On Saturday last the two-seater was taken out with the intention of attacking the British duration records, sufficient petrol being taken for a flight of 5 hours. After nine circuits, a distance of about 16 miles, had been covered, the engine stopped, and the pilot was forced to bring the machine down to the ground. It was then found that the trouble was due to water in the petrol. Some of the latter was then drawn off and another start made, but only four circuits had been completed when the engine again stopped from the same cause, and the pilot once more glided down to earth. One of the latest pupils at the Valkyrie School is Lusetti Archimede, the Italian pilot, who has decided to fly a machine of this type.



AT THE LONDON AERODROME.—Mr. Clutterbuck by Mr. Everett's monoplane, where this machine has been under test.

New Forest Aviation School, Beaulieu, Hants.

ON December 22nd, Major Cook, flying Mr. McArdle's Blériot-cum-Gnome, made his first flight for his certificate, being up for 9 mins., at an average height of 300 ft., doing four circuits of the ground. Getting off in the latest approved style he made a very pretty landing 145 yds. from the mark. Immediately afterwards Mr. Poggioli, on a Blériot-Anzani, flew three circuits of the ground, about 4½ miles, in 8 mins., landing within 80 yds. of the mark. This was his first trial for a certified flight.

The next day Major Cook made a second flight for his certificate, lasting 8 mins., at an average height of 200 ft., and landed within 25 yds. of the mark. Mr. Tinline's Howard Wright biplane was out doing rolling practice.

On the Wednesday, the weather being brilliantly fine, there was considerable activity. The ball was started rolling by Major Cook completing the third flight for his certificate, lasting 15 mins., at a height of about 500 or 600 ft., then effecting a landing inside 147 yds. of the mark. Mr. Poggioli then tried a short flight, but landed on one wheel and bent two stays. Mr. Tinline, on his Howard Wright, was doing good work, the machine showing perfect control. Just before lunch Major Cook made another flight, lasting 8 mins., as a reserve; and although this was only the fourth time he had been on the Gnome-engined machine, he landed inside 14 yds. of the mark. Mr. Wilson made some good straight flights about 10 ft. off the ground, keeping the machine perfectly steady. This emphasises Mr. McArdle's point, that plenty of ground practice goes three parts of the way to teaching a man to fly, by giving him that confidence in himself and machine so necessary to the art.

Salisbury Plain.

ON Wednesday, December 28th, Mr. Low was out with the Bristol-Gnome, and taking the pupils Mr. Knight, Mons. Maron (who, it may be mentioned, weighs 17 stone), and Lieut. Cammell in turn as passengers, made good flights around Stonehenge. Captain Wood also flew over Stonehenge and the surrounding country, rising to 400 or 500 ft.

On Thursday, the 29th, Mr. Graham-Gilmour was out with the Bristol biplane supplied to him by the British and Colonial Aeroplane Co., to which he had fitted his E.N.V. engine, making trials preparatory to his attempt for the Michelin Cup. He made a



Mr. B. G. Bouwens.

Lt. G. B. Hynes, R.G.A.

Mr. St. Croix Johnstone.

Above we give three pupils of the Blériot School, who, at the London Aerodrome, near Hendon, on the same day—December 28th—successfully qualified for their Royal Aero Club's pilot certificates. Easily a record for Great Britain.

number of good flights, and from the very first showed a complete control of the machine. It speaks well for the ease with which the Bristol can be handled that this was the first occasion on which Mr. Graham-Gilmour had used a biplane, his previous experience being entirely with monoplanes.

Mr. Low, the school instructor, also made a number of good flights of 200 to 300 ft. high, taking Lieut. Cammell, who is a monoplane, with him. This was the latter's first flight on a biplane, but he was able immediately to show complete control of the machine. Mons. Maron and Mr. Knight took the lever under Mr. Low's instructions in the morning and afternoon, and both showed much progress.

On Friday, the 30th, the wind was 15 to 20 miles per hour. In the afternoon Mr. Graham-Gilmour performed a fine flight of 1 hr. 2 mins., covering 6 laps of 5½ miles each—about 32 miles together. The wind proved somewhat strong, but he was never in any difficulty.

In connection with Mr. Gilmour's try for the Michelin Cup the helpful feeling prevailing between aviators and those firms concerning themselves with aviation like the Bristol Company was very evident. Hearing that Mr. Gilmour wanted to have a run for the Michelin, Mr. O. C. Morison, like the real good sportsman that he is, at once proffered the loan of his 60-80-h.p. E.N.V. engine provided it could be fitted in time. The Bristol Company without hesitation agreed to lend one of their biplanes and at once set to work fitting the E.N.V. engine. Although this was received only on Sunday, the 25th ult., by the Friday everything was in readiness,

with the result just recorded, that Mr. Gilmour was by way of a preliminary trial able to keep the air for over an hour.

Mr. Low was out with the Bristol-Gnome, taking as passenger, in addition to the school pupils, Lieut. Neave of the Royal Engineers. The wind fell in the afternoon and Lieut. Cammell passed his first test for his certificate.

Mr. Graham-Gilmour the previous evening had some difficulty through the carburettor not being of English make, and it was found necessary to make a change, work proceeding through the night. Everything was in readiness on the Saturday morning, and he made half a dozen starts for the British Michelin Cup, but had to come down through engine trouble. Finally his attempt, after another start, had to be concluded through a cylinder blowing off the engine.

On Saturday, the 31st, Monsieur Maron did several landings and starts, with Mr. Low in the passenger seat guiding him in the control. Lieut. Cammell completed his second and third tests for his certificate, making his flights in excellent style. This is the sixth pupil who has taken his certificate on the Bristol machine. Mr. Low took out on the Bristol-Gnome several of the Engineers who were acting as observers for Mr. Graham-Gilmour, and after landing them flew back to the hangar. Capt. Wood was also travelling a considerable distance with Mr. Knight as a passenger. Later in the day Mr. Low took up Miss Cammell, sister of Lieut. Cammell, who had just taken his certificate, and she was entirely delighted with the experience.

Altogether, flying has been in progress at the "Bristol" School each day since Wednesday for three to four hours a day.

BRITISH NOTES OF THE WEEK.

New Year's Greetings.

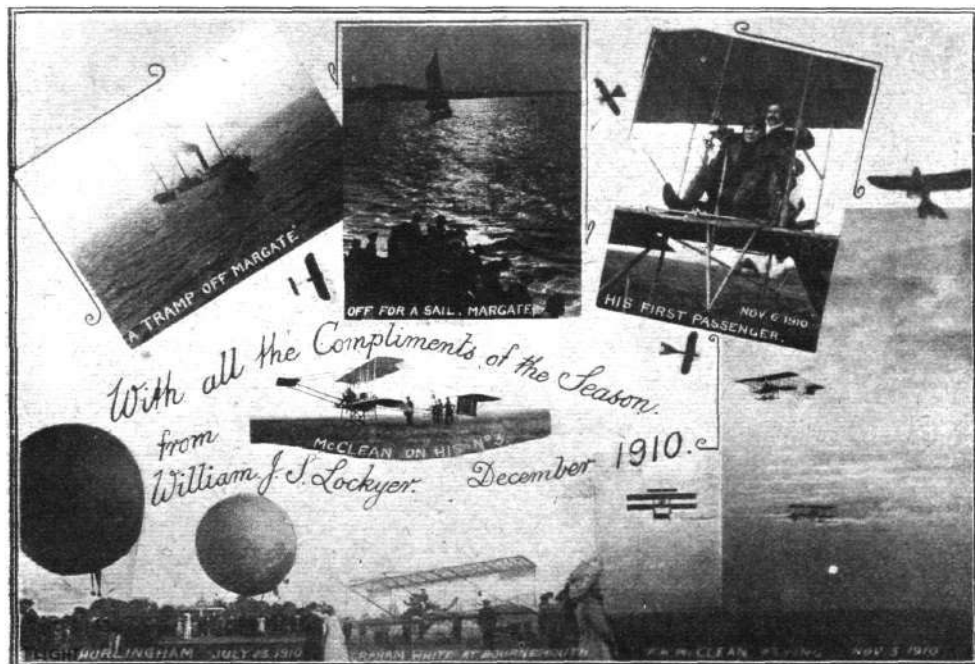
To all our readers we wish a hearty and prosperous New Year, and FLIGHT returns grateful thanks for all the good wishes which have reached us during the past fortnight.

Lectures at the Northampton Institute.

Now that the holidays are over, activity will soon recommence at the various educational institutions throughout the country, and one of the centres of aeronautical learning to which we draw our readers' attention is the Northampton Institute, Clerkenwell. On January 11th the Aeronautical Society's series of lectures will

recommence with a paper on the construction and design of aeroplane surfaces and controls by H. F. Lloyd. These lectures commence at 8 o'clock, and those who have not previously attended can obtain free tickets for the course on application to the secretary of the Aeronautical Society, 53, Victoria Street, Westminster.

Those anxious to take up a study of propellers will also be interested to learn of Mr. Handley Page's special series of lectures on this subject, which are being delivered at the same place on Friday evenings, the first taking place on January 13th at 7.15 p.m. The fee for the course is very small, and that part of the course which deals with propellers will be complete in itself.



A Seasonable Greeting from Dr. W. J. S. Lockyer, embodying some pleasant flying retrospects for 1910.

FOREIGN AVIATION NEWS.

The Pilot-Aviators' Banquet.

ALTOGETHER some 92 duly certificated pilot aviators sat down at the Hotel Continental, Paris, on the eve of the New Year at the banquet arranged by our French contemporary, *L'Auto*. M. Clement Ader presided, and in a speech welcoming those present he paid a touching tribute to those who have laid down their lives for the advancement of the science. He also gave a brief review of the development of aviation, dwelling especially upon the part played in the early days by the Wright Bros., Santos Dumont, Henry Farman, Louis Blériot, and Robert Esnault-Pelterie. The other speakers were M. R. Esnault-Pelterie and M. Henri Desgrange. As a souvenir of the occasion each one of the diners was presented with a beautiful little model of a Bosch magneto.

A New International Prize.

It will be remembered that some two years ago the well-known champagne house of Pommery offered to provide a big prize for the encouragement of flight. Owing to unavoidable delays the regulations have only just been drawn up and issued. The prize will take the form of a cup of 50,000 francs (£2,000), and the competition will be an international one, the prize being awarded to the pilot who, starting from France, flies the longest distance in a straight line and at a speed exceeding 50 kiloms. an hour. The competition will be spread over a period of three years ending October 31st, 1913, but at the end of each six months ending with April 30th and October 31st in each year, the flyer who holds the first position in the competition, provided he has beaten the previous record, will have the trophy provisionally awarded to him and be given a prize of 7,500 francs as well as a small replica of the cup. Entries must be made to the Ligue Nationale Aérienne, 27, Rue de Rome, Paris.

Activity at Juvisy.

AVIATOR Weiss has now turned his attention to the Sloan aeroplane, with which he has been making some successful flights at the Juvisy aerodrome. On the 31st ult. he was in the air for an hour and a half, and on the previous day for half an hour. Some very fine flying has also been done by Bobba on his Goupy biplane.

On the 31st ult. he made two flights, each lasting for over an hour, while Ladougue, on a similar machine, accompanied by G. Amelineau, was also flying for an hour, and on the previous day Bobba was up for a couple of hours at a stretch. A fourth flight of over an hour's duration was also made at Juvisy on the last day of the old year, this being by Godard, using his monoplane. In addition to these flyers there are a considerable number of others who are experimenting and learning at Juvisy.

A Good Trip by Bathiat.

TEMPORARILY abandoning his trials on the Sommer monoplane, Bathiat carried out a good flight on a Sommer biplane on the 30th ult. Rising from the flying ground at Mouzon he was in the air for 1 hr. 20 mins., during which he passed over Remilly Brezilly, Mouzon, and Beaumont, afterwards returning to his starting point.

Two Farman for the Spanish Army.

ON the 30th ult. Louis Dufour was busy testing at Bouy two Henry Farman machines of the military type which have been built for the Spanish Army. The officers who are to pilot them are being trained at Mourmelon by Osmond.

Trials with the Morane Monoplane.

AT the flying ground of the Wright School at Pau, on the 28th and 29th ult., Aubrun was busy testing the new Morane monoplane with a view to competing for the Michelin Cup. On the first day his best trip was one of 45 minutes, while on the following day he flew across to the Blériot School and then over the surrounding country. In a second trial, which lasted for about half an hour, he attained a speed over a distance of 8 kiloms. of 103 kiloms. an hour.

French Military Flyer Killed.

By the sad fatality to Lieut. Caumont the French Army has lost one of the most promising of its band of aviators. For some time he has successfully piloted Farman and Sommer biplanes, and also a Blériot monoplane; but a week or two ago, in view of his decision to try for the Coupe Deperdussin, he went to the Buc



A PILOT-AVIATORS' DINNER.—A group of the aviators who dined together in Paris on the evening of December 31st under the auspices of our contemporary, *L'Auto*. Seated in the centre is M. Ader, who presided at the banquet, and amongst more prominent flyers present may be easily distinguished MM. Leblanc, Esnault-Pelterie, Pauthan, Rougier, Tabuteau, Busson, de Pischof, Rigal, Wagner, de Baeder, Parisot, Georges Blanchet, Labouchere, Eug. Renaux, &c.

flying ground to practise on a two-seated Nieuport monoplane. He had attained a fair amount of success in his trial flights, and on the 30th ult. determined to make a final trial with the machine before making his actual essay for the cup. He had flown one or two rounds of the ground in good style, and at a speed of over 100 kiloms. an hour, when it was seen that he was apparently in difficulties with the steering of the machine. He was at this time at a height of 250 ft., and tried to glide down to earth. The machine, however, refused to answer to its helm, and dropped to the ground, the aviator being thrown out and so severely injured that he died the same evening. Previous to his death the French President conferred the Cross of the Legion of Honour on Lieut. Caumont.

Laurens Wins the Coupe Deperdussin.

Two final attempts to better Laurens' record were made on December 31st, but neither of them was successful. At Douzy, Andre Noel started off in spite of the severe wintry conditions, but after he had covered only about 50 kiloms. in 40 mins. he was obliged to land owing to a frozen carburettor. The second attempt was made at Rheims, where Vidard was flying on the Deperdussin monoplane for 55 kiloms., and is said to have beaten the passenger speed record up to that distance, although no times are as yet available. Some difficulty was experienced apparently in obtaining the services of an official timekeeper, and by the time one arrived it was impossible to beat the record. It will be remembered that the winning flight was made on December 21st at Buc, when Laurens, accompanied by M. Hickel and mounted on his R.E.P. monoplane, completed 100 kiloms. in 1 hr. 16 mins.

German Officers' Cross-country Flight.

LAST week, leaving Doerbitz on an Aviatik biplane, Lieut. Mackentum, accompanied by Lieut. Förster, flew to Magdeburg, a distance of close on 100 miles. Later in the day a second machine also made the same trip. It is, however, impossible to give details, as these trials were conducted secretly by the military authorities.

Cattaneo Wins a Prize.

USING his Gnome-engined Blériot, Cattaneo, on the 16th ult., succeeded in flying across the Rio de la Plata from Buenos Ayres to Colona, a distance of 55 kiloms. By this trip he won the prize of £4,000 recently offered under the special conditions.

Blown Out to Sea.

WHILE flying his Farman biplane along the sea shore at Genoa on Monday week, the Italian aviator, Cirri, was caught by a sudden gust of wind and blown out to sea for a distance of about a mile and a half. Stopping the motor the aviator brought the machine down suddenly to the surface of the water from a height of 150 feet, and he was picked up by a torpedo boat little the worse for his thrilling adventure.

Flying in South Russia.

A FINE cross-country flight was made the other day by the Russian aviator, Vasilieff. Starting from Elizabetopol he flew to Tiflis, a distance of 126½ miles, in an hour and 55 mins. The flight was carried out on a Farman biplane, and the aviator carried a dispatch from the Commandant at Elizabetopol to the Viceroy. He proposes shortly to fly from Tiflis to Vladikavkaz, a distance of 270 miles.

Pietroski has announced that he will shortly make an attempt to fly from Sebastopol to Constantinople on his Blériot monoplane, the distance across the Black Sea being 280 miles.

Baron de Caters at Calcutta.

THE closing days of the Old Year saw a large crowd assembling at Calcutta to witness flying by Baron de Caters on his biplane and Tyck on the monoplane. Baron de Caters was much sought after for passenger flights, and on the 28th he carried as many as thirty people for short trips, among them being General Mahon. The high flying of Tyck has proved a great attraction, and on Friday of last week he attained a height of 6,500 feet during a twenty minutes' trip.

Latham Takes Curtiss for a Trip.

DURING a long flight made at Los Angeles on the last day of the old year, Hubert Latham carried Glenn Curtiss as a passenger on his Antoinette monoplane. Afterwards he took Lieut. J. W. MacClaskey, of the United States Signal Corps, for a short trip.

U.S. Government and Aviation.

As a result of his recent visit to Europe, Mr. Dickinson, the United States War Secretary, in his annual report to Congress,



M. Laurens and his passenger on his R.E.P. monoplane, with which he won the Deperdussin Prize for monoplanes by a flight at Buc, on December 21st, of 100 kiloms. in 1 hr. 16 mins., beating all previous records.

very strongly recommends that a generous vote of money should be made to provide the Signal Corps with a reasonable number of monoplanes and biplanes for instruction and field work. He states that although the United States was the first nation officially to recognise the aeroplane for military purposes by the tests conducted at Fort Myer in 1908, the aeronautic equipment of the U.S. Army stands very much where it did. It consists simply of one Wright aeroplane, one small practice dirigible balloon, and three small captive balloons, while the trained personnel consists of one lieutenant and nine enlisted men on duty in connection with aeronautics. There is but one officer, who is a licensed pilot, for three balloons. The War Secretary concludes that, in his judgment, the time has come when it would be wise to remedy this state of affairs, and place the American Army on a similar footing to that of other nations.

Death of Moisant and Hoxsey.

THE closing day of the Old Year saw the names of two of America's foremost aviators added to the list of victims of dynamic flight, one of the two men being well known here by reason of his exploit in flying from Paris to London last year. At Harahan, on the banks of the Mississippi, not far from New Orleans, Mr. J. B. Moisant set out on a Blériot monoplane in an attempt for the Michelin Cup, the flight being witnessed by an official representative of the Aero Club of America. The accident occurred during a preliminary trial to test the machine, when, after circling the ground twice, the monoplane was seen to dip its head and drop down from a height of 100 ft. The aviator was pitched out of the machine, and, when picked up, was still alive. He was hurried on a special train to New Orleans, but, unfortunately, died before reaching there. As to the cause of the accident nothing is known definitely; but it is pointed out that the position of the course is an extremely dangerous one, owing to the tricky air currents and the gusty winds.

Mr. A. Hoxsey, who carried Mr. Roosevelt for a short aerial trip last autumn, was the victim of the second accident, which occurred at Los Angeles while the aviator was attempting to better his height record of the previous Monday. He had gone up to a great height and was descending in a series of spiral glides for which he was famous, when at a height of about 300 feet the machine was caught by a sudden gust of wind and overturned. In its rush to the earth the machine again turned over twice, but the aviator retained his seat and was apparently killed by the motor falling upon him. Here again the accident was probably caused by the tricky nature of the course, both Latham and Willard having given over flying for the day owing to the prevalence of dangerous air pockets.

CORRESPONDENCE.

* * The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.

Correspondents communicating with regard to letters which they have read in **FLIGHT**, would much facilitate ready reference by quoting the number of each such letter.

NOTE.—Owing to the great mass of valuable and interesting correspondence which we receive, immediate publication is impossible, but each letter will appear practically in sequence and at the earliest possible moment.

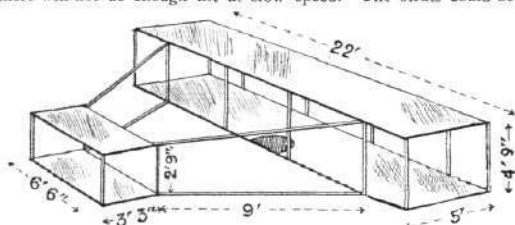
MAN-CARRYING GLIDER.

[1003] I intend building a glider of the Voisin type, of the dimensions shown below. I would be much obliged if you could give me some points about construction. I weigh about 8 st. 12 lbs. Would the glider need curved planes? The operator places his chest and stomach on the seat, and his legs hang free, for starting and steering. What thickness of wood would be necessary? Would three-quarters of an inch square do? And what would be the best wood for the purpose, and what would the cost be for the right thickness? I thought willow or American white pine. Would it be possible to start a glide on such a machine by springing into the air with it from a fence or wall, or would the tail catch? I would like to know, if it is not too much trouble to you, the necessary thickness of the main longitudinal spars of the planes, the spars that join the front and tail planes, and the uprights between the planes.

Cambridge.

J. L. ELSMLIE.

[The spars should be about 1 in. by 1½ in., otherwise they will tend to warp too much. The ribs should be cambered, otherwise there will not be enough lift at slow speed. The struts could be



about 1 in. by ¾ in. oval section. Any straight-grained wood, well selected, would be suitable; the selection is more important than the kind of wood.

Gliding should be practised down a hill of about 1 in 5 slope. —ED.]

MAGNALIUM TUBING.

[1004] Can any reader kindly explain a method of bending magnalium tubing?

Dulwich.

B. TRASK.

IS THE HELICOPTER POSSIBLE?

[1005] In Mr. Reynolds' letter, No. 940, appearing in your issue of the 10th ult., he states "that there is no actual example" of a helicopter type of machine having flown or even risen from the ground by its own power.

It is evident that he is not conversant with the very careful experiments carried out by M. Cornu in France. M. Cornu in 1907 constructed a helicopter consisting of two 20 ft. diameter screws, one behind the other, the blades of which were adjustable to any angle; provision was made for the horizontal progress of the machine by means of two inclined planes, so placed that a small portion of the downward current of air produced by the screws was changed in direction so as to obtain a horizontal thrust. The power of the Antoinette engine at the speed at which it ran (about 900 revolutions per minute) was estimated by the maker at not more than 14-h.p.

The machine rose from the ground carrying two men and travelled forward at a speed of 10 ft. per second, the weight lifted being about 704 lbs. The flight was of very short duration, under a minute, somewhat less than the first aeroplane flight of the Wright Brothers.

There is no doubt that M. Cornu's machine was very unstable. The most interesting point in the experiment from a scientific point of view is, if we calculate the possible lift from the screws with the

power applied (assuming the machine to be stationary), we could not expect a greater lift than about 450 lbs. This goes to prove that the forward motion tended to augment the lifting power; after all, that is what we should expect, because by the forward motion each screw is enabled to act upon and set in motion air over a greater area in a second of time. If we substitute this value for the area acted upon in place of the disc area of the two screws, we at once see there is no reason why the screws should not lift the above weight.

Experiments at the Koutchino Institute have since proved that the lifting power of a screw was increased nearly three times when subject to a considerable horizontal blast. The reason is obvious in either of the above cases. With the forward motion of the machine, or the horizontal blast of air, the screws are unable to force the air downwards with the same velocity as when stationary; this causes a greater resistance, resulting in a greater lift.

We are therefore forced to the conclusion that to obtain great lifting power from a helicopter the forward speed must be considerable.

M. Cornu, I believe, experimented further with this object, but his results seem to prove that the question of stability altogether outweighs the question of lift, principally for the reason that with a forward motion the reaction from one blade is not counterbalanced by the reaction from the blade opposite (one blade is acting against a horizontal air current and the other is travelling with the current during a period of each revolution).

From the above I am forced to agree with Mr. Reynolds that the helicopter is not a practical machine, although my reasons for doing so, it will be noticed, are very different to his.

Gray's Inn Square.

J. R. PORTER, A.M.Inst.C.E.

[1006] In reference to the remarks of your correspondent, Mr. William A. Weaver (letter 978, in your issue of December 24th), concerning my letter under the above title (940, in your issue of December 10th), your correspondent does not seem to realise that, whether for a flying machine, a bridge, or any other mechanical structure, the same mechanical laws and limitations govern all, and that any structure or machine in which the load is concentrated will and must be heavier to sustain the load than one in which the load is more distributed or less concentrated, and that the larger the machine or structure is, and therefore the greater the total weight or load borne, the lighter per unit of weight will be the machine to bear the load; and therefore it follows that if, as stated in my letter, supposing the machine to be of such a size that the weight to be lifted amounts to 3 tons for each propeller, it is impossible to obtain a structure strong enough to bear the load and at the same time be light enough to fly or be air-borne; it will be still more impossible to do it with a smaller machine as then the unit weight in respect to unit strength will be increased, and the smaller machine will be found relatively heavier than the larger, and Mr. Weaver's suggested combination of supporting planes and propelling screws with lifting screws as well, will be heavier than either, for the more the total power required is divided up the heavier will the machinery and necessary supporting structure be to transmit that power. The same remarks apply to flapping wings or reciprocating paddles; these must be very strong, as they bear the whole weight of the structure at the hinge to which they are articulated, and the weight of the machinery per horse-power (that is the useful horse-power exerted by the wings or paddles) is very heavy indeed, as owing to their reciprocating action the inertia stresses, due to their reversals in direction are very heavy, and absorb so large a proportion of the engine-power that so large an engine has to be provided that its weight becomes prohibitive. Mr. Weaver talks about suspending the structure from the screws in a helicopter, instead of resting it on the top of the axles. This will be an actually heavier form of construction than the one I mentioned; the friction will be greatly enhanced, and therefore the necessary horse-power (and weight) of the engine will also be greatly increased, while the concentrated weights on the structure still remain as I have said in my former letter. If Mr. Weaver cares to write to me, I shall be pleased to hear how far he has got. But, all said and done, a certain weight has to be lifted in a certain way. This requires a certain horse-power (and, therefore, weight) to be exerted at a certain place or places; this requires a certain structural strength, which can easily be calculated and its weight known, when the question, to fly or not to fly, can at once be answered, without any waste of time or money in experiment. No structural conception that does not agree with the laws of mechanics can ever be brought to a successful issue.

Maidenhead.

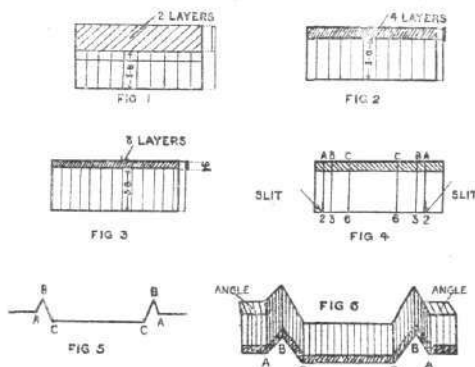
CHARLES J. REYNOLDS.

MODELS. PAPER GLIDERS.

[1007] It may be of interest to the readers of your excellent paper, FLIGHT, to be able to make a paper glider that will go a long way from a slight height with no other power than gravity.

To construct the glider, you must procure a common piece of exercise paper of thin quality; it should measure about 20.5 cm. by 16.5 cm. Take the roughest long side and bend it over, so as to be 5.6 cm. from the other long edge (Fig. 1). Double this again, and make four layers (Fig. 2), and again, making eight in all (Fig. 3).

You now have your paper with a weight on it in front; the width should be about 1.5 cm., and its thickness should be as thin as possible. Now mark points on it 2 cm., 3 cm., and 6 cm. from



each short end, then draw lines through the points at right angles to the long edge (Fig. 4). Now cut a slit along each of the lines, A (Fig. 4), 1 cm. long, then bend the lines, A, B, and C, in the following manner: A inwards, B outwards, and C inwards (Fig. 5).

Your glider is nearly done; but you must have some angles turned up at the back of the glider to prevent the weight from dropping straight down, so turn up the ends where the slit is (Fig. 6).

To start it, hold it with the weight in front between the thumb and first finger, the back of the glider also being in between the thumb and finger. Send it forward, and leave go; it will go on sailing, falling about 1 in 3½.

If it turns to the left, it may be because the left angle is stronger than the angle on the right side, so forming extra resistance to the left side. There are other reasons which will be found out by practice.

Before closing, I must say that FLIGHT is a paper which has been a long-felt want. Wishing you every success with it, Maidenhead.

RUPERT E. NEVE.

MODEL FARMAN.

[1008] I have only made one model aeroplane, and that is a Farman biplane with the biplane tail. I cannot get this model to fly. The elastic motors which I have tried have not given enough revolutions, and I therefore ask some reader to give me a description of a motor which would fly this model. It is 3 ft. 5 ins. long, 2 ft. 8½ ins. wide. The area of the main planes is 422½ sq. ins. Ormskirk.

F. HUNTER.

MODEL ANTOINETTE DRAWINGS.

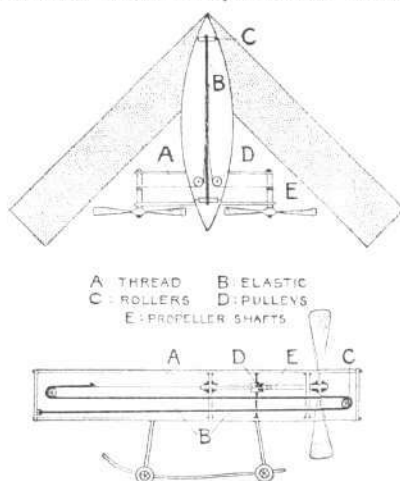
[1009] I notice in a back number that N. S. Barker (Bury) (787) asks for drawings of a model Antoinette. I can recommend him to send to Home Handicrafts, Farringdon Street, London, E.C., for Nos. 118, 119, 120, 121, of their paper "Home Handicrafts," post free 8d., which contains very clear instructions and illustrations. Chewton Mendip.

J. A. S. FLYNN.

A NEW TYPE OF ELASTIC MOTOR.

[1010] I am pleased to see that someone has constructed a model of the Dunne aeroplane. For some time I have contemplated doing so myself, but as yet have found no time. The following is the idea I had for the construction of the motor: A piece of stout elastic is fastened at the forward end of the body and brought round a small hard wood roller at the rear end. To the free end of the elastic two pieces of strong thread of equal length are secured.

These pass over another little roller in the front part of the machine, and then, separating right and left, pass through two small pulleys to the propeller-shafts, to which they are fastened. When the pro-



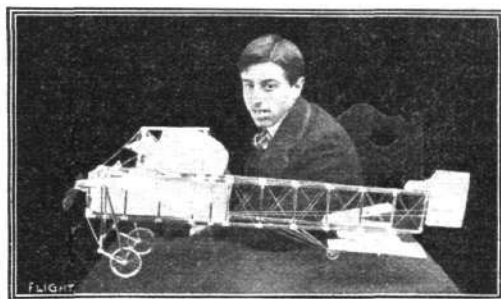
pellers are wound up, the thread is coiled round the propeller-shafts, thus stretching the elastic. This type of motor has the advantage of ensuring the same power and revolutions to each propeller, and to a great extent overcomes the limitations imposed by the short body of the machine. The accompanying sketches show the general arrangement quite clearly.

Glasgow.

"BUTRE."

MODEL BLÉRIOT.

[1011] I have pleasure in enclosing photographs of a model Blériot which I have just completed. It measures 3 ft. 6 ins. across main plane, and 2 ft. 6 ins. in length. The main plane has a



chord of 9 ins. It is fitted with a model 7-cyl. Gnome motor and an 11 in. Gamage propeller. I am about to get a motor for it, and feel sure I shall have some good results.

The model took four days to complete.

Hornsey.

SYDNEY A. MALVISI.

A CLAPHAM MODEL CLUB.

[1012] If you will insert the following in FLIGHT we shall feel greatly obliged.

A model aeroplane club is now being formed in Clapham, and any persons living in or near the district, who would like to become members, please communicate immediately (by letter only) as it is hoped to start the club on January 1st, 1911. The club will have a large workshop, where members will be able to keep their materials and make their models. This workshop will be situated within five or ten minutes' walk from "The Plough," and will be open for the use of members at any time of the day and evening.

The club will buy materials in large quantities and will resell at slightly under outside prices, to members only. Both entrance and

weekly fees are extremely moderate. For fuller particulars please apply to F. Smith, 1, Avondale Mansions, Bromells Road, Clapham, S.W.

F. SMITH, H. SHARPE, J. DOLLITTLE,
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PAPER MODELS.

[1013] *Re* Mr. C. A. K. Cox's paper model biplane, letter No. 842, I am greatly interested in this model, and have built one according to drawings published by you, but there is one question I should like to ask Mr. Cox, and that is, can he get his model to glide without a dihedral angle on the front plane? I have tried with the cambered plane, but as soon as the model is thrown from the hand the front of the machine rises and the machine slides backward on to its tail end, but I can get a steady glide of 15 ft. from my model when the front plane is at a dihedral angle.

London, S.W.

P. W. PEEL.

AIRSHIP NEWS.

The Willows Airship Reaches Issy.

AT last Mr. Willows has accomplished the purpose for which he set out from London on November 4th. On the 28th ult. he brought his little dirigible, the "City of Cardiff," out from his shed at Lamotte-Breuil and sailed over to Issy, where he anchored after a trip of two and a half hours. On landing, he was given a very enthusiastic reception by the spectators, and both he and his mechanic were carried shoulder high. Mr. Willows took the airship out for two short spins, one of half an hour's duration, on the following day. On the 31st ult. the little airship ventured aloft twice. In the morning it was taken out and cruised over Paris for some time, encircling the Eiffel Tower, while in the afternoon it was sailing for some time above the fortification at Issy.

Another Protest against the Ae.C.A.

WHEN the Federation Aeronautique Internationale meets in Paris on Tuesday to consider the protest of the Royal Aero Club of the United Kingdom against the award of the Statue of Liberty prize, it will also have to consider a protest from the Lower Rhine Aero Association against the American Aero Club's award of the Gordon-Bennett Balloon Cup. The grounds on which the protest is made are: 1. That the American aeronauts did not enter for the race before the official date of the close of entries; 2. That the notes in the log book of Mr. Hawley were so blurred so as to be practically illegible; 3. That the record of landing was signed by a person who did not assist at that operation; 4. That the cup was awarded before the balloon was recovered.

Greetings by Dirigible.

ON the last day of the Old Year the dirigible "Parseval VI" cruised over Berlin for some time bearing a great inscription in German, "Best wishes for the New Year." Large crowds of people assembled in the streets to watch the evolutions of the airship and cheered the aeronauts.

On the previous day also the dirigible was seen over the German capital, having sailed over from Bitterfeld to Johannisthal. Some difficulty was experienced in keeping the balloon at its proper altitude, and it was feared at one time it would find an enforced resting-place on the roofs of some of the houses. Happily, however, the hangar was regained in safety.



A Season's Greeting in a material form reaches us as usual from Mr. Robert W. Coan, of the well-known aluminium foundry in Goswell Road. The reproduction above gives an idea of the pretty little card or fruit dish which Mr. Coan sends out to his friends and customers. Any of the latter who have not yet received theirs should send a gentle reminder, when their intimation will be honoured by Mr. Coan by return of post.

RECORDS.

Duration.—Henry Farman (France), at Etampes, on a Henry Farman biplane fitted with a Gnome motor: 8 hrs. 12 mins., covering 463 kiloms. (288½ miles).

Distance.—Maurice Tabuteau (France), at Buc, on a Maurice Farman biplane, 584.935 kiloms. (365 miles) in 7h. 48m. 31½s.

Altitude.—G. Legagneux, at Pau, on a Blériot monoplane with Gnome motor: 3,200 metres (10,746 ft.).

Speed.—A. Leblanc (France), on a Blériot monoplane, fitted with Gnome motor, 5 kiloms. in 2 mins. 45½ secs. = 108 k.p.h. (67.5 m.p.h.).

Aeronautical Patents Published.

Applied for in 1909.

Published January 5th, 1911.

- 28,593. C. LORENZEN. Aerial propellers.
- 26,007. T. O. SMITH. Aerial machines.
- 26,328. E. MOSSÉ. Aeroplanes.
- 30,194. L. RENATAU AND A. A. HUMPHREY. Aeroplanes.

Applied for in 1910.

Published January 5th, 1911.

- 4,095. L. BLÉRIOT. Securing propellers and flywheels of aeroplanes.
- 7,678. G. DI FENILE. Screw-propellers for aerial vessels.
- 12,746. C. B. B. LAURES. Instrument for measuring angular movements of submarine and aerial vessels relatively to horizon and magnetic meridian.
- 18,661. E. DE MARCAY AND E. MOONEN. Aeroplanes.

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